

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A method for identifying a polypeptide ~~peptide~~ as capable of binding to a ~~proteinaceous~~ target protein, said method comprising

a) displaying a library of polypeptides ~~the peptide~~ on the ~~surface~~ surfaces of a replicable display ~~package~~ packages, wherein said packages display polypeptides from the library of polypeptides;

b) synthesizing a set of heterologous oligopeptides derived from the ~~proteinaceous~~ target protein on a solid phase,

c) contacting ~~the said library of polypeptides~~ peptide on the surface of said ~~package~~ packages with the oligopeptides on said solid phase, and

d) identifying whether binding of said packages to said oligopeptides occurs,

wherein ~~the said~~ displayed polypeptide ~~peptide~~ on the surface of a said replicable display ~~package~~ packages is an immunoglobulin heavy chain, an immunoglobulin light chain, a heavy-light chain pair, a single chain antibody fragment, VH, a VL, a Fab, a Fv, a single chain Fv (scFv) or a disulfide-bridged Fv.

Claim 2 (Canceled)

Claim 3 (Currently Amended): A method for distinguishing between polypeptides ~~peptides~~ capable of binding to a ~~proteinaceous-antigen~~ target protein and polypeptides ~~peptides~~ not having that capability, said method comprising

a) displaying a library of candidate polypeptides ~~peptides~~ on the surfaces of replicable display packages,

b) synthesizing a set of heterologous oligopeptides derived from the ~~proteinaceous-antigen~~ target protein on a solid phase,

c) contacting ~~the said~~ candidate polypeptides ~~peptides~~ on the surfaces of said packages with ~~the said~~ oligopeptides on said solid phase to permit binding by said candidate polypeptides ~~peptides~~, and

d) washing the solid phase to remove unbound display packages, and thereby distinguish between polypeptides ~~peptides~~ capable of binding and polypeptides ~~peptides~~ not having that capability,

wherein the said displayed candidate polypeptides ~~peptides~~ are immunoglobulin heavy chains, immunoglobulin light chains, heavy-light chain pairs, single chain antibody fragments, VH domains, VL domains, Fab domains, Fv domains, single chain Fv (scFv) domains or di-sulfide-bridged Fv domains.

Claim 4 (Canceled)

Claim 5 (Currently amended): The method according to claim 1, whereby ~~the~~ said replicable display package is a phage particle.

Claim 6 (Currently amended): The method according to claim 1, whereby ~~the~~ said replicable display package is a bacterium, a yeast or a spore of a microorganism.

Claim 7 (Currently amended): The method according to claim 5, whereby the binding polypeptide ~~peptide~~ is displayed on the surface of the phage particle by insertion of a genetic sequence encoding said polypeptide in a gene encoding a surface protein of said phage particle.

Claim 8 (Currently amended): The method according to claim 1, whereby the displayed polypeptide ~~peptide~~ is a single chain antibody fragment.

Claim 9 (Currently amended): The method according to claim 1 whereby the displayed polypeptide ~~peptide~~ is an ScFv.

Claim 10 (Currently amended): The method according to claim 1, further comprising e) contacting said polypeptide ~~peptide~~ with a sample not containing said oligopeptides.

Claim 11-12 (Canceled)

Claim 13 (Currently amended): The method according to claim 3, whereby ~~the~~ said replicable display packages are phage particles.

Claim 14 (Currently amended): The method according to claim 3, whereby ~~the~~ said replicable display packages are bacteria, yeast or spores of a microorganism.

Claim 15 (Currently amended): The method according to claim 13, whereby ~~the~~ said candidate polypeptides ~~peptides~~ are displayed on the surface of the phage particles by insertion of genetic sequences encoding said polypeptides ~~peptides~~ in a gene encoding a surface protein of said phage particles.

Claim 16 (Currently amended): The method according to claim 3, whereby ~~the~~ said candidate polypeptides ~~peptides~~ are single chain antibody fragments.

Claim 17 (Currently amended): The method according to claim 3 whereby the candidate polypeptides ~~peptides~~ are ScFv domains.

Claim 18 (Currently amended): The method according to claim 3, further comprising e) eluting bound display packages and contacting them with a sample not containing ~~said antigen~~ said oligopeptides.

Claims 19-20 (Canceled).